

### **Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application:

#### **Listing of Claims:**

1. (Currently Amended) A method of diagnostic investigation of a sample comprising a fluid from a biological organism, the method comprising the steps of:

accommodating the sample in a measuring device,

~~determining~~ measuring quantitatively at least one macroscopic physical quantity ~~property~~ of a sample, wherein said at least one macroscopic physical quantity ~~property~~ is measured by ~~characterizes an~~ interaction of said sample with sound waves, and

correlating said at least one measured macroscopic physical quantity ~~property~~ with reference data which characterize at least one condition of said sample, and

determining at least one diagnostic characteristic of said sample based on a correlation between said at least one macroscopic physical property and said reference data.  
~~data, which characterize at least one condition of said sample of said organism, for obtaining at least one diagnostic characteristic.~~

2. (Currently Amended) The method of claim 1, wherein said determining step comprises measuring of at least one macroscopic physical property ~~quantity~~ from the group consisting of resonance frequency of sound waves, sound wave-length, sound ~~velocity~~ velocity, viscosity, compressibility, mass density, shear wave parameter, acoustic impedance and refractive index of sound waves.

3. (Currently Amended) The method of claim 1, wherein said determining step comprises measuring said at least one macroscopic physical ~~value~~ property with a relative precision better than  $10^{-3}$ .

4. (Currently Amended) The method of claim 1, wherein said determining step comprises measuring at least two macroscopic physical ~~properties~~ quantities, said at least two macroscopic physical ~~properties~~ quantities being measured at different temperatures and/or pressures of said sample.

5. (Currently Amended) The method of claim 1, wherein said determining step comprises measuring at least one relative macroscopic physical ~~property~~ quantity of said ~~at least one physical value~~ sample, said at least one relative macroscopic physical ~~property~~ quantity being measured as a difference or quotient of a first measured macroscopic physical ~~property~~ quantity obtained with said sample and a second measured macroscopic physical ~~property~~ quantity obtained with a reference sample.

6. (Currently Amended) The method of claim 5, wherein said determining step comprises measuring at least two relative macroscopic physical ~~properties~~ quantities, said at least two relative macroscopic physical ~~properties~~ quantities being measured at different temperatures and pressures of said sample and said reference sample, respectively.

7. (Currently Amended) The method of claim 1, wherein said determining step comprises a step of comparing said at least one macroscopic physical ~~property~~ quantities, a corresponding

relative macroscopic physical property~~quantity~~, or a curve shape of ~~said macroscopic~~  
physical properties ~~quantities~~ or relative macroscopic physical properties ~~quantities~~ with at  
least one threshold reference macroscopic physical property~~quantity~~ or reference curve  
shape for obtaining said at least one diagnostic characteristic.

8. (Currently Amended) The method of claim 1, wherein said step of ~~obtaining~~ determining  
said at least one diagnostic characteristic of a sample comprises a detection of at least one  
biomolecule in said sample.

9. (Currently Amended) The method of claim 8, wherein said detection comprises a step of  
determining a presence of at least one protein, lipid, ~~lipide~~ or polysaccharide in said sample.

10. (Currently Amended) The method of claim 1, wherein said step of ~~obtaining~~  
determining said at least one diagnostic characteristic comprises detecting ~~of a disease of~~  
said biological organism.

11. (Currently Amended) The method of claim 10, wherein said detecting step comprises a  
step of detecting at least one disease comprising a neurodegenerative disease producing  
characteristic biomolecules in said sample from a biological organism ~~a body liquid of said~~  
~~organism~~.

12. (Currently Amended) The method of claim 1, further comprising a step of preparing  
said sample before said determining step, said preparing step comprising at least one of an

addition of an additive to said sample, a purification of said ~~sample, sample~~ or a separation of at least one component from said sample.

13. (Currently Amended) A method of diagnostic investigation of a CSF liquor sample from a human being or an animal, the method comprising the steps of:

measuring at least one sound velocity value through said ~~in said prepared~~ sample at, at least one temperature or pressure, and

evaluating said at least one value of sound velocity, a corresponding relative value, or a curve shape of values or relative values and detecting at least one predetermined disease producing biomolecule in the sample.

14. (Currently Amended) The method of claim 13, further comprising the step of preparing said sample, said preparing comprising separation of albumin and immunglobulins, ~~immunglobulines~~, before said measuring step.

15. (Withdrawn, Currently Amended) A diagnostic device for investigating a sample of a biological organism, said device comprising:

a measuring device for ~~determining~~ measuring at least one macroscopic physical ~~property~~quantity of said sample, wherein said at least one macroscopic physical ~~property~~quantity characterizes an interaction of said sample with sound waves, and

an evaluating device for evaluating said at least one macroscopic physical ~~value~~ property and for correlating said at least one physical ~~property~~quantity with reference data,

which characterize at least one condition of said sample ~~or~~of said organism, for obtaining ~~at least one~~ diagnostic information.

16. (Withdrawn) The diagnostic device of claim 15, wherein said measuring device comprises a sound resonator cell and a sound frequency detention circuit.

17. (Withdrawn) The diagnostic device of claim 15, wherein said measuring device comprises a temperature or pressure control device.

18. (Withdrawn) The diagnostic device of claim 15, wherein said evaluating device comprises a calculating circuit containing a comparison or a correlation circuit.